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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,520	02/02/2006	Abbas Razavi	F-863 (31223.00086)	9377

25264 7590 02/10/2009

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ART UNIT	PAPER NUMBER
1796	
MAIL DATE	DELIVERY MODE
02/10/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/535,520
Filing Date: February 02, 2006
Appellant(s): RAZAVI, ABBAS

Diane L. Kilpatrick-Lee
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 8, 2008 appealing from the Office action mailed July 21, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

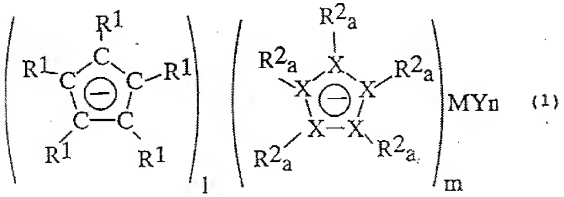
(8) Evidence Relied Upon

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 22-26 and 28-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama et al. (EP 0 741 145).

Katayama discloses a metallocene Compound (A) represented by Formula (1) for olefin polymerization (page 3, line 35 to page 4, line 56; and page 5, line 34 to page 9, line 18):



(1)

In Formula (1), R^1 group and R^2 group can be bonded together to provide a bridged metallocene compound (page 4, line 9, and page 4, lines 54-56); the adjacent R^1 groups of the cyclopentadienyl ring can be bonded to provide ligands such as indenyl, substituted indenyl, fluorenyl and substituted fluorenyl groups such as methylfluorenyl, dimethylfluorenyl and t-butylfluorenyl (page 4, lines 47-58); when one of X is N or P atom and the rest of X's are C atoms, the heteroatom containing five member can be selected from pyrrolyl and phospholyl (page 5, lines 14 and 29). Katayama expressly exemplifies various bridged metallocene compounds containing cyclopentadienyl or indenyl group such as ethylenecycpentadienyl dimethylpyrrolyl titanium dichloride (page

5, line 59) and dimethylsilylindenyl triphenylphospholyl titanium dichloride (page 7, lines 12-13). Therefore, it would have been obvious to for a skilled artisan to envision the corresponding fluorenyl group containing metallocene compounds by simply replacing cyclopentadienyl or indenyl group in the metallocene compounds with fluorenyl or substituted fluorenyl groups to come up with fluorenyl group containing metallocene compounds such as ethylenefluorenyl dimethylpyrrolyl titanium dichloride, ethylene(methylfluorenyl) dimethylpyrrolyl titanium dichloride, dimethylsilylfluorenyl triphenylphospholyl titanium dichloride, etc. since those metallocene compounds are within the scope of Katayama's disclosure. It is noted that Katayama does not exclude any of the bridge position on the rings of Formula (1); one would have understood that all positions including nitrogen or phosphorus position on the ring can be the bridging position. Those metallocene compounds such as ethylenefluorenyl dimethylpyrrolyl titanium dichloride and dimethylsilylfluorenyl triphenylphospholyl titanium dichloride with the bridging groups of ethylene and dimethylsilyl bridged on various positions of the five-member rings would meet the limitations of metallocene compounds (II)-(V) of claim 25.

Thus, it would have been obvious to a skilled artisan at the time the invention was made to employ Katayama's teaching to prepare various metallocene compounds such as those represented by Formulas (II)-(V) of claim 25 and use those metallocene compounds to provide a catalyst composition for olefin polymerizations in search for catalysts with superior activities, stabilities and/or stereoregularities since such is within

the scope of the Katayama's disclosure and in the absence of any showing criticality and unexpected results.

(10) Response to Argument

Appellants argue that Katayama does not teach, show, or suggest the currently pending claims. Appellants further indicate that independent claims 22 and 43 require that at least one of the Cp^1 and Cp^2 is a fluorenyl group.

As detailed in Grounds of Rejection section above, Katayama discloses a metallocene Compound (A) represented by Formula (I) for olefin polymerization (page 3, line 35 to page 4, line 56; and page 5, line 34 to page 9, line 18). In Formula (I), R^1 group and R^2 group can be bonded together to provide a bridged metallocene compound (page 4, line 9, and page 4, lines 54-56), and the adjacent R^1 groups and the adjacent R^2 groups of the cyclopentadienyl rings of Compound (A) can be bonded to provide ligands such as indenyl, substituted indenyl, fluorenyl and substituted fluorenyl groups such as methylfluorenyl, dimethylfluorenyl and t-butylfluorenyl (page 4, lines 47-58). Apparently, Katayama expressly suggests fluorenyl or substituted fluorenyl containing metallocene compound. As set out above, Katayama exemplifies various cyclopentadienyl and indenyl groups containing metallocene compounds such as such as ethylenecycpentadienyl dimethylpyrrolyl titanium dichloride and dimethylsilylindenyl triphenylphospholyl titanium dichloride and therefore it would have been obvious to come up with the corresponding fluorenyl or substituted fluorenyl group containing metallocene compounds by replacing cyclopentadienyl or indenyl in those metallocene compounds to provide metallocene compounds such as ethylenefluorenyl

dimethylpyrrolyl titanium dichloride, ethylene(methylfluorenyl) dimethylpyrrolyl titanium dichloride, dimethylsilylfluorenyl triphenylphospholyl titanium dichloride, etc.. There is no better motivation than the direct teaching of the prior art itself. Since all of those metallocene compounds are disclosed in Katayama as olefin polymerization catalyst compounds, one would have expect those metallocene compounds to function as olefin polymerization catalyst compound with reasonable expectation of success.

In view of the foregoing, the rejections of record are deemed proper and thus maintained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Caixia Lu/
Primary Examiner

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